REMARKS

The present invention utilizes a transmission unit to repeatedly transmit first messages from a transmission starting time to a transmission finishing time with a specific program. The first messages are multiplexed with data modules containing data of a specific program. Reference can be made, for example, to Figure 5 of our present application and the explanation of Figure 5 in the specification starting on Page 22, Line 17.

> "when contents C1002 (module number ID-1) is transmitted in the time period between 8:13:45 and 8:14:00," an event message which instructs to cache the contents C1002 is multiplexed with a data module corresponding to the contents C1002 and transmitted at intervals of one second).

Therefore, it is possible to transmit the first messages separately from the modules containing the data of the specific program, in transmission cycles which are different from transmission cycles of the modules.

Amended Claim 11 also is characterized in "a generation unit included in a scheduling unit that generates "the first messages which specify the specific program and instruct the receiving apparatus to store the specified specific program in the receiving apparatus. . . ." This claimed characteristic makes it clear that the first messages specify the modules and instruct to cache the modules. Therefore, even if the first messages are transmitted in arbitrary cycles separately from caching target modules, it is possible to cause the receiving apparatus to certainly cache the target modules.

The same inventive features are also set forth in the other independent claims of record.

The Office Action rejected each of the Claims 11-18 over a combination of *Willard* (U.S. Patent No. 6,374,405) in view of *Delpuch* (U.S. Patent No. 5,448,568) under 35 U.S.C. §103.

The *Willard* reference was primarily relied upon for the principal elements of our claims and specifically taught the delivery of a packetized module wherein the transmission of the packets would start at a calculated start time and all the packets except for the last packet would be transmitted within the transmission interval that was calculated from the start time.

The last packet will not be transmitted until the scheduled delivery time, thereby giving a greater transmission interval and flexibility for the broadcasting station to schedule delivery of both the packets and the modules. A quick review of the allowed claims discloses that this was the principal teaching to a person of ordinary skill in the art by the *Willard* disclosure.

The Office Action referred to Column 8, Lines 5-14 for setting forth a reproduction starting time and a reproduction finishing time, further contending that it was inherently reproduced between a reproduction starting time and a reproduction finishing time. Actually, Column 8, Lines 5-14 simply disclose that the packetized signal is reconstructed in a set top box, executed and displayed on the television. The actual start and finish time is determined by the scheduler unit that subtracts a transmission interval from the delivery time to determine a transmission start time, as shown in the flowchart of Figure 4 and as can be determined from Box 44. The last packet is held until a delivery time set by the scheduler and the transmission of the last packet is signal representation to the set top box of completion or the final delivery time.

The Office Action had cited Column 5, Line 55 to Column 6, Line 16 for the scheduling unit. However, the *Willard* reference teaches a scheduler consisting of a delivery time calculator or start time calculator and a controller with a notation in Column 9, Line 35, that the distinctive feature of the present invention over that of the prior art being, "it is distinctive because the last packet of each module is held until the delivery time." See Column 9, Lines 35-41.

The *Delpuch* reference teaches a compression of audio and video transmission in the form of transport packets, Column 1, Lines 39-41. Interactive video associated with the compressed video and audio can be compiled in the functional modules, compressed and also formed into transport packets. Additionally, signal modules are generated to condition the television receivers to suspend or resume execution of an application. The signal modules can be multiplexed in the packet stream to reprogram respective receivers to accommodate any interactive program changes. The signal modules queue the receiver when a non-interactive program is to be broadcast, allowing the receiver to suspend execution of the interactive portion of the programming.

The Office Action contends that *Willard* discloses a system employing repeated transmission of first messages wherein the first messages are transmitted separately from data modules containing data of the specified program.

However, *Willard* basically relates to packet transmission, and, therefore, *Willard* is different from the present invention which relates to a particular multiplexing transmission. Indeed, *Willard* discloses, as shown in Figure 5, that the module 51 containing the data segment 52 and the CRS segment 53 is divided into three transmission units 54a, 54b and 54c. Furthermore, the three transmission units 54a, 65b, and 54c are each divided into a plurality of packets. Figure 5 shows an example in which the transmission unit 54b is divided into the auxiliary information (header information) 58 and the data segments 59a, 59b, and 59c. The Office Action contends that this auxiliary information 58 is transmitted separately from the data segments 59a, 59b, and 59c. Based on this contention, the Office Action rejects the present invention as not having novelty and inventiveness.

However, the auxiliary packet 58 of *Willard* contains control information (for example, information regarding a location within the memory at which the module is to be loaded) (see *Willard*, Column 7, Lines 62-65). Accordingly, although being separated from other data segments, the auxiliary packet 58 must be transmitted together with other data segments. Therefore, it is impossible to transmit the auxiliary packet 58 in accordance with an arbitrary timing.

Furthermore, according to Figure 5 of *Willard*, the header information 58 is transmitted together with the data segments 59a, 59b, and 59c. Therefore, if the data size of these data segments is large, intervals for transmitting the header information 58 are inevitably large. Conversely, if the data size of the data segments is small, the header information 58 is transmitted at frequent intervals corresponding to the data size. That is, a timing for transmitting the control information is determined in accordance with the size of other data segments.

In other words, even if, as hypothetically contended by the Office Action, the auxiliary packet of *Willard* contained a message, that is a cache instruction equivalent to the first messages of the present application, it would be impossible to arbitrarily determine a transmission timing of the auxiliary packet since the auxiliary packet functions as a header for other packets.

Certainly, in making an obviousness rejection the resulting hypothetical combination of features must at least provide an operational device.

> [I]t is generally settled that the change in prior art device which makes the device inoperable for its intended purpose cannot be considered to be an obvious change.
>
> *Hughes Aircraft Co. v. United States*, 215 U.S.P.Q. 787, (Ct.Cl. Trial Div. 1982)

According to the amended Claim 11 of the present application, modules containing data and first messages which specify the modules and instruct to cache the modules are multiplexed and transmitted. Accordingly, it is possible to transmit the first messages separately from the modules containing the data in arbitrary cycles which are different from cycles of the modules. This structure is neither disclosed nor even suggested by *Willard*. Therefore, we believe that the invention recited in the amended Claim 11 of the present application should be allowed.

The *Delpuch* reference does not address or provide the missing teachings from the *Willard* reference in view of the presently amended claims.

Accordingly, it is believed the case is now allowable and early notification of the same is requested.

If the Examiner believes a further telephone conference would assist in the prosecution, the undersigned attorney can be contacted at the listed phone number.

Very truly yours,

SNELL & WILMER L.L.P.

Joseph W. Price
Registration No. 25,124
600 Anton Boulevard, Suite 1400
Costa Mesa, California 92626-7689
Telephone: (714) 427-7420
Facsimile: (714) 427-7799